

(12) Official Gazette for Unexamined  
Patent Applications (A)

(Kokai) No. 86-65809

(51) Int. Cl.<sup>4</sup>  
A 61 K 7/00

ID Code

Intrabureau No.  
7306-4C

(43) Laying-Open Date: July 21, 1986

Request for Examination: Not Yet Submitted  
No. of Inventions: 1

(Total of 4 pages)

(54) Title of the Invention: A Makeup Cosmetic Material

(21) Application No.: 84-187139

(22) Filing Date: September 6, 1984

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## Specification

1. Title of the Invention  
A makeup cosmetic material.

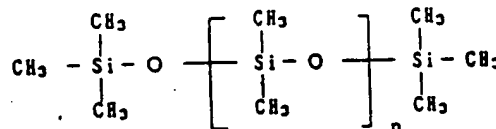
## 2. Claims

(1) A makeup cosmetic material, characterized by containing 1-70% by weight of the organic silicone resin shown under (A) below, 10-98% by weight of the volatile silicone oil shown under (B) below, and 0.5-55% by weight of powder.

- (A) An organic silicone resin composed of  $R_3SiO_{1/2}$  units (where R is a hydrocarbon group or phenyl group having 1-6 carbon atoms) and  $SiO_2$  units with an  $R_3SiO_{1/2}$  unit :  $SiO_2$  unit ratio in the range of 0.5/1-1.5/1.  
 (B) At least 1 of the volatile silicone oils shown in General Formula (I) and General Formula (II).

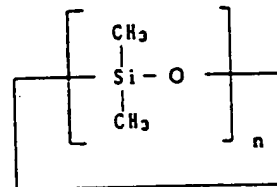
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## General Formula (I)



(In the formula, n is an integer from 0 to 3.)

## General Formula (II)



(In the formula, n is an integer from 4 to 6.)

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### 3. Detailed Description of the Invention [Fields of Industrial Use]

The present invention relates to a makeup cosmetic product, and more specifically, to an outstanding long-lasting makeup cosmetic product having favorable water resistance, perspiration resistance, and oil resistance.

In addition to ordinary makeup cosmetic materials, the term "makeup cosmetic material" used in the present invention also comprises makeup bases.

#### [Prior Art]

Makeup cosmetic materials come in a variety of forms and types, such as solid foundations composed of a mixture of powder and oil, solid foundation-oil foundations, and lipstick. Moreover, there are also emulsion foundations which have an emulsion as their base, but all of these substances are characterized by containing inorganic powders such as talc, kaolin, iron oxide, titanium oxide, titanium/mica pearl pigments, etc., and organic pigments such as nylon, cellulose, and talc pigments.

Such makeup cosmetic materials are subject to streaking, running, etc., due to oils in the skin, perspiration, or oil components of other cosmetic materials. Under high-temperature conditions in summer in particular, running of makeup is a common problem which all women would like to see solved.

On the other hand, cosmetic bases are also used in order to allow the makeup cosmetic material to glide on easily and to create a beautiful finish, but few of these compositions take into consideration the fact that the makeup cosmetic material should also be long-lasting.

Technologies which have been proposed in order to prevent running of makeup include that presented in Japanese Patent Application Publication No. 73-1503, but in this case, as a relatively high-viscosity trimethylsilyl-terminated diorganosiloxane chain is used and substances such as silica are used in order to form the composition, this causes a sticky sensation when the material is applied to the skin, and the effect of preventing running of makeup is insufficient.

#### [Problems to be Solved by the Invention]

In view of the above situation, the inventors of the present invention conducted thorough research in order to provide a makeup cosmetic material having outstanding properties of preventing running of makeup, and they discovered that when a particular organic silicone resin is used together with a volatile silicone oil, and a powder is then added, it is possible to provide a makeup cosmetic material

which does not feel sticky, has a light, refreshing feel during use, and also prevents running of makeup, thus arriving at the present invention.

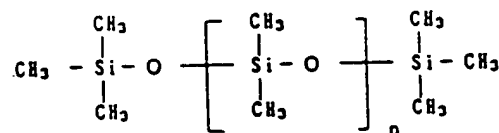
#### [Means for Solving Problems]

Specifically, the present invention comprises a makeup cosmetic material which contains 1-70% by weight of the organic silicone resin shown under (A) below, 10-98% by weight of the volatile silicone oil shown under (B) below, and 0.5-55% by weight of powder.

- (A) An organic silicone resin composed of  $R_3SiO_{1/2}$  units (where R is a hydrocarbon group or phenyl group having 1-6 carbon atoms) and  $SiO_2$  units with an  $R_3SiO_{1/2}$  unit :  $SiO_2$  unit ratio in the range of 0.5/1-1.5/1.
- (B) At least 1 of the volatile silicone oils shown in General Formula (I) and General Formula (II).

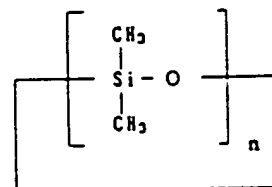
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#### General Formula (I)



(In the formula, n is an integer from 0 to 3.)

#### General Formula (II)



(In the formula, n is an integer from 4 to 6.)

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The above organic silicone resin (A) used in the present invention can easily be obtained by hydrolysis of corresponding known silanes.

Moreover, the aforementioned chain-type silicone oil and ring-type silicone oil indicated by General Formula (I) above used in the present invention are both volatile and can be used as solvents with respect to the aforementioned organic silicone resin.

A suitable composition ratio of the essential components is as follows.

Organic silicone resin is used in the amount of 1-70% by weight, volatile silicone resin in the amount of 10-98% by weight, and powder in the amount of 0.5-55% by weight respectively with respect to the total volume of the makeup cosmetic material.

Of course, in addition to the above essential components, by blending in water and appropriate surface-active agents and taking advantage of emulsion technology, it is possible to produce a water-in-oil or oil-in-water emulsion-type makeup cosmetic material which has outstanding properties of preventing running of the makeup.

Depending on the desired application, in addition to the above substances, it is also possible to blend oils and fats, waxes, medicinal preparations, aromatic agents, or other volatile components into the makeup cosmetic material of the present invention in an amount which does not have an adverse quantitative or qualitative effect on the action of the invention.

The following is a description of the invention in further detail by means of practical examples. The invention is not limited to these practical examples. All blending ratios are given in % by weight.

#### Practical Example 1. Oil foundation

(1) Kaolin	25.0
(2) Titanium dioxide	15.0
(3) Iron oxide	3.0
(4) Microcrystalline wax	4.0
(5) Liquid paraffin	5.0
(6) Sorbitan sesquileate	1.0
(7) Octamethylcyclotetrasiloxane	Remaining amount
(8) Organic silicone resin, $(\text{CH}_3)_2\text{SiO}_{1/2}/\text{SiO}_2 = 1.5/1$	2.0
(9) Aromatic agents	Appropriate amount

After stirring and dissolving components (4)-(8) at 70-80°C, components (1)-(3) are added and dispersed. After de-aeration, component (9) is added, and a specified container is filled to obtain an oil foundation.

The oil foundation of Practical Example 1 is a makeup cosmetic material with outstanding water resistance, oil resistance, and perspiration resistance which shows little running of makeup and also provides a light, refreshing feel on use.

#### Practical Example 2. Liquid lipstick

(1) Dimethylsiloxane 0.65 cs ( $n = 0$ )	20.0
(2) Dimethylsiloxane 2.0 cs ( $n = 3$ )	20.0
(3) Organic silicone resin, $(\text{CH}_3)_2\text{SiO}_{1/2}/\text{SiO}_2 = 1.5/1$	40.0
(4) Glycerin triisostearate	10.0
(5) Red No. 226	10.0
(6) Aromatic agents	Appropriate amount

Components (1)-(3) are stirred and melted at 70-80°C, and in a separate operation, components (4) and (5) are treated with a roller, added, and dispersed. After de-aeration, component (6) is added to obtain liquid lipstick.

The liquid lipstick of Practical Example 2 shows outstanding water resistance, oil resistance, and perspiration resistance, and is also resistant to running as a result of adhesion to cups, etc. It also has a light, refreshing feel during use.

#### Practical Example 3. Mascara

(1) Dimethylsiloxane 1.5 cs ( $n = 2$ )	4.5
(2) Octamethylcyclotetrasiloxane	10.0
(3) Organic silicone resin, $(\text{CH}_3)_2\text{SiO}_{1/2}/\text{SiO}_2 = 0.8/1$	70.0
(4) Black iron oxide	15.0
(5) P.O.E. (20 moles) sorbitan monolaurate	0.5
(6) Aromatic agents	Appropriate amount

Components (1)-(3) are stirred and dissolved at 70-80°C, and components (4) and (5) are added and dispersed. After de-aeration, component (6) is added to obtain mascara.

The mascara of Practical Example 3 is resistant to running due to tears, etc., and also shows no adhesion to the eyelids.

## Practical Example 4. Cosmetic base

(1) Kaolin	10.0
(2) Titanium dioxide	5.0
(3) Red iron oxide	0.3
(4) Yellow iron oxide	0.2
(5) Methylphenylpolysiloxane ( $n = 100$ )	20.0
(6) Dimethylsiloxane 2 cs ( $n = 3$ )	10.0
(7) Solid paraffin	5.0
(8) Microcrystalline wax	4.0
(9) Sorbitan sesquioleate	1.0
(10) Organic silicone resin, ( $\text{CH}_3$ ) $\text{SiO}_{1/2}$ / $\text{SiO}_2 = 1/1$	2.0
(11) Decamethylcyclopentasiloxane	24.5
(12) Hexamethylcyclotrisiloxane	0.5
(13) Aromatic agents	Appropriate amount

Components (1)-(4) are mixed and crushed. In a separate operation, components (5)-(11) are mixed and dissolved at 70-80°C. The two components are stirred and mixed, and after de-aeration, component (12) is added to obtain the cosmetic base.

The cosmetic base of Practical Example 4 allows favorable sliding of the makeup cosmetic material to be used on it and has the action of preventing running of the makeup.

## Practical Example 5. Highlighter

(1) Decamethylcyclopentasiloxane	95.0
(2) Organic silicone resin, ( $\text{CH}_3$ ) $\text{SiO}_{1/2}$ / $\text{SiO}_2 = 1.3/1$	4.3
(3) Titanium-mica pearl pigment	0.5
(4) Aromatic agents	Appropriate amount

Components (1) and (2) are added and dissolved, and components (3) and (4) are added and dispersed to obtain highlighter.

The highlighter of Practical Example 5 is resistant to running of makeup and provides a refreshing, clean feel.

## [Effect of the Invention]

The makeup cosmetic material of the present invention is a makeup cosmetic material having favorable water resistance, perspiration resistance, and oil resistance properties which has outstanding staying power and causes little running of makeup. Moreover, its feeling of use is also characterized by ease of gliding and a light, refreshing feel.

Applicant: Shiseido Co., Ltd.